

Customer No. 77327

Amended Brief

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Title: ROLL STABILITY CONTROL SYSTEM FOR AN
AUTOMOTIVE VEHICLE USING COORDINATED CONTROL OF ANTI-
ROLL BAR AND BRAKES

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CERTIFICATE OF MAILING/TRANSMISSION

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_____5/21/09 _____ /Lisa E. Brown/_____

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RESPONSE TO NOTIFICATION OF NON-COMPLIANT APPEAL BRIEF

In response to the Notification dated May 5, 2009, the following summary of the claimed subject matter is presented herein to provide a concise explanation of the subject matter defined in each of the independent claims 1, 8, 12 and 15 involved in the appeal, referring to the specification by paragraph number and to the drawings and reference numbers.

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V. Summary of Claimed Subject Matter

1. A roll stability control system {Fig. 2, element 18, ¶ 0031} for an automotive vehicle {Fig. 1, element 10, ¶0025} comprising:

an active anti-roll bar system {Fig. 3, element 62, ¶0041};

a rollover sensing system generating {Fig. 1, element 16, ¶0026} a roll attitude signal indicative of an impending rollover of the vehicle {Fig. 2, elements 34 and 37, ¶0034}; and

a controller {Fig. 3, element 26, ¶0041} coupled to the active anti-roll bar system {Fig. 3, element 16, ¶0041} and the rollover sensing system {Fig. 1, element 16, ¶0026}, said controller {Fig. 3, element 26, ¶0041} controlling the active anti-roll bar {Fig. 4, element 56, ¶0042} to prevent the vehicle from rolling over in response to the roll attitude signal.

8. A method of operating a roll stability control system {Fig. 2, element 18, ¶ 0031} for an automotive vehicle {Fig. 1, element 10, ¶0025} having an active anti-roll bar {Fig. 3, element 62, ¶0041} comprising:

determining a roll attitude signal indicative of an impending rollover of the vehicle {Fig. 7, elements 150, 152, ¶0061}; and

controlling the active anti-roll bar system to prevent the vehicle from rolling over in response to the roll attitude signal {Fig. 7, element 158, ¶0063}.

12. A method of operating a roll stability control system {Fig. 2, element 18, ¶ 0031} for an automotive vehicle {Fig. 1, element 10, ¶0025} having an active anti-roll bar {Fig. 3, element 62, ¶0041} and a brake system {Fig. 3, element 60, ¶0041} comprising:

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determining a roll attitude signal indicative of an impending rollover of the vehicle {Fig. 7, elements 150, 152, ¶0061};

when the roll attitude is between a first and second threshold, controlling the active anti-roll bar system to reduce a rolling moment of the vehicle {Fig. 7, element 158, ¶0063}; and

when the roll attitude is above a second threshold, controlling the active anti-roll bar system and the brake system to reduce a rolling moment of the vehicle {Fig. 7, element 170, ¶0065}.

15. A method of controlling roll stability of an automotive vehicle {Fig. 1, element 10, ¶0025} having a front and rear brake system {Fig. 3, element 60, ¶0041}, and a front and rear active anti-roll bar system {Fig. 3, element 62, ¶0041} comprising the steps of:

determining a roll angle estimate in response to roll sensing system sensors {Fig. 7, element 152, ¶0061};

controlling a front and rear active anti-roll bar in response to the roll angle estimate {Fig. 7, element 158, ¶0065 and 0067}; and

controlling a front and rear brake controller in response to the relative roll angle estimate {Fig. 7, element 170, ¶0065, 0067} to provide a predetermined tire force vector {Fig. 6, element $C_{pf}(k)$, ¶0059}.

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Respectfully submitted,

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